

Understanding NICE guidance

Information for people who use NHS services

Lowering cholesterol to reduce the risk of heart disease, stroke and peripheral arterial disease

NICE 'clinical guidelines' advise the NHS on caring for people with specific conditions or diseases and the treatments they should receive.

This booklet is about the care and treatment of people with an increased risk of heart disease, stroke and peripheral arterial disease (diseases of the heart or blood vessels which are caused by narrowing of the arteries and are known as cardiovascular disease) in the NHS in England and Wales. It covers people at higher risk of these diseases, and also those who have already had a heart attack or stroke or other cardiovascular disease. It explains guidance (advice) from NICE (the National Institute for Health and Clinical Excellence). It is written for people with or at higher risk of cardiovascular disease, but it may also be useful for their families or carers or for anyone with an interest in these conditions.

The booklet aims to help you understand the care and treatment options that should be available in the NHS. It does not describe cardiovascular disease or the tests or treatments for it in detail. Your GP, nurse or another member of your healthcare team should discuss these with you. There are examples of questions you could ask throughout this booklet to help you with this. Some sources of further information and support are on page 11.

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The advice in the NICE guideline covers:

- Adults at higher risk of heart disease, stroke or peripheral arterial disease (cardiovascular disease). Risk of cardiovascular disease increases with age, as well as in people who smoke or who have high blood pressure or high cholesterol. People with heart disease in the family or men with a South Asian (for example, Indian, Pakistani or Bangladeshi) background are also at higher risk.
- People who have already had a heart attack, stroke or 'mini-stroke' (transient ischaemic attack or TIA).
- People who have angina or some other forms of cardiovascular disease.

The guideline doesn't cover everyone who is at increased risk of cardiovascular disease. This guideline does not include people with diabetes, those with major genetic causes of high cholesterol (familial hypercholesterolaemia) or people with chronic kidney disease, who are also at higher risk.

Your care

Your treatment and care should take into account your personal needs and preferences, and you have the right to be fully informed and to make decisions in partnership with your healthcare team. To help with this, your healthcare team should give you information you can understand and that is relevant to your circumstances. All healthcare professionals should treat you with respect, sensitivity and understanding and explain cardiovascular disease and the treatments for it simply and clearly.

The information you get from your healthcare team should include details of the possible benefits and risks of particular treatments. You can ask any questions you want to and can always change your mind as your treatment progresses or your condition or circumstances change. Your own preference for a particular treatment is important and your healthcare team should support your choice of treatment wherever possible.

Your treatment and care, and the information you are given about it, should take account of any religious, ethnic or cultural needs you may have. It should also take into account any additional factors, such as physical or learning disabilities, sight or hearing problems, or difficulties with reading or speaking English. Your healthcare team should be able to arrange an interpreter or an advocate (someone who supports you in putting across your views) if needed.

If you agree, your family and carers should have the chance to be involved in decisions about your care. Family members and carers also have the right to the information and support they need in their roles as carers.

If people are unable to understand a particular issue or are not able to make decisions for themselves, healthcare professionals should follow the advice that the Department of Health has produced about this. You can find this by going to the Department of Health website (www.dh.gov.uk/consent). Your healthcare professional should also follow the code of practice for the Mental Capacity Act. For more information about this, visit www.publicguardian.gov.uk

If you think that your care does not match what is described in this booklet, please talk to a member of your healthcare team.

If a treatment described in this booklet appears suitable for you, but it is not available, you should talk to your local Patient Advice and Liaison Service (PALS) in the first instance. If they are not able to help you, they should refer you to your local Independent Complaints Advocacy Service.

Heart disease, stroke and peripheral arterial disease

Heart disease and stroke are the most common forms of cardiovascular disease. Heart disease is a condition in which the blood vessels in the heart become narrowed or blocked by the build up of fat. This can result in angina (chest pains) and heart attack. A stroke is when the normal blood supply to part of the brain is cut off, which can damage the area of the brain affected.

Other forms of cardiovascular disease include a 'mini-stroke' (transient ischaemic attack or TIA) and peripheral arterial disease (narrowing of the arteries, usually in the legs).

Cardiovascular disease is the most common cause of death in the UK, and is a major cause of illness, disability and poor quality of life. Smoking, high blood pressure and having high levels of fats (lipids), such as cholesterol, in your blood increase your risk of heart disease or stroke. Changing your diet and taking more exercise can reduce your cholesterol and help cut your risk. Medication may be necessary.

Assessing your risk of heart disease, stroke and peripheral arterial disease

Your GP surgery should have a plan to identify people over 40 who do not already have cardiovascular disease or diabetes and who might be at higher risk of developing cardiovascular disease.

The GP surgery should check factors like age, sex, blood pressure, cholesterol levels and smoking in the medical records of all these people. If these factors suggest that you have a one in five (20%) or greater chance of developing cardiovascular disease in the next 10 years, you should be offered a full risk assessment.

If you seem to be at higher risk of cardiovascular disease, your healthcare professional (your GP or practice nurse) should discuss with you whether you would like an assessment. If you decide to have one, your GP or nurse will calculate your risk of developing cardiovascular disease. They will use a computer program to take account of:

- your age
- your sex
- whether you smoke
- your blood pressure
- your cholesterol level.

They may take a blood sample to measure your cholesterol and lipid levels if these are not already known. If these levels and your family history suggest that you have a genetic cause of high cholesterol you may need more tests or referral for specialist care.

Talking about your risk of cardiovascular disease

Your GP or nurse should consider all the factors that affect your risk. They will ask about your ethnic background because this is an important risk factor. They will ask whether any close relatives have had heart disease at a young age. They will measure your weight and height and consider whether you are taking any drugs to lower your blood pressure. They should explain your risk of developing cardiovascular disease over the next 10 years. The information should include:

- your chance of developing cardiovascular disease (for example, a one-in-five or 20% chance)
- diagrams and written information to help you understand your risk.

Your GP or nurse should tell you that they can provide only an estimate of your risk. They should ask you about what you already know about your risk and how you feel about it. They will discuss whether you would be willing to make changes to your lifestyle (for example, stopping smoking, changing your diet, taking more exercise, or drinking less alcohol). They will also ask you whether you would agree to have tests and treatments if needed. Your GP or nurse should make sure you understand what has been discussed.

You and your GP or nurse should work together to develop a plan for reducing your risk of cardiovascular disease. Your GP or nurse may discuss the option of taking a type of drug called a statin to reduce your cholesterol.

If you have a 20% 10-year risk, it means that one out of every five people with the same risk will have a heart attack or stroke in the next 10 years.

Questions you might like to ask your healthcare team

- Please tell me more about heart attack, stroke and cardiovascular disease.
- Please explain more about my risk of having a heart attack or stroke. Can you show me a graph or picture that shows what the risk might mean to me?
- Are there any support organisations nationally or in my local area?
- Would it help if I made some changes to my lifestyle, such as doing more exercise, stopping smoking or changing my diet?

Making changes to your lifestyle

If you are at higher risk of developing cardiovascular disease, or you have already had heart disease or a stroke, your GP or nurse should suggest ways of helping you to achieve a healthy lifestyle.

Help with stopping smoking

If you smoke, your GP or nurse will advise you to stop. If you decide you want to stop, they should give you support and advice. They should offer to refer you to a support service, such as NHS Stop Smoking Services. However, if you can't or don't want to use this, you may be offered medication or nicotine replacement therapy instead.

Eating a healthy diet

Your GP or nurse should advise you to eat a healthy diet that helps protect your heart.

- Eat less fat. Avoid foods that contain a lot of fat, such as fried or processed foods or takeaways.
- Particularly avoid a lot of saturated fat (for example, fatty meat, butter and cheese). Try to choose foods containing monounsaturated fats (such as olive oil and rapeseed oil) and polyunsaturated fats (such as corn oil and sunflower oil) instead.
- Choose healthy ways of cooking and preparing your food. Don't fry food or roast food in fat such as butter or ghee. Instead, steam, poach, bake, casserole or microwave. Add flavour using spices, herbs and lemon juice instead of using buttery, cheesy or creamy sauces, which tend to be high in fat.
- Eat at least five portions of fruit and vegetables a day.
- Eat at least two portions of fish a week, including a portion of oily fish (such as herrings, sardines, mackerel or salmon). A portion is about 140 g (a fillet of fresh fish or a small tin). If you are pregnant you should eat no more than two portions of oily fish a week.

You can find information to help you with this at www.eatwell.gov.uk/healthydiet

Getting enough exercise

Your GP or nurse should recommend you take at least 30 minutes of moderate exercise a day, 5 days a week. Examples that you could include in your daily life are walking briskly, climbing the stairs and cycling.

You don't have to do the 30 minutes in one go – you could do several 10-minute bouts during the day. If you can't do moderate exercise, for example because of health problems, you should try to exercise as hard as is safe for you.

Your GP or nurse should agree your exercise aims with you, taking into account your preferences and what you are able to do. They should give you written information about the benefits of exercise and about local opportunities to get active. These might include sports or cycling clubs, dancing classes, swimming pools or gyms.

Becoming a healthy weight

If you are overweight, your GP or nurse should offer you advice and support on losing weight and keeping it off. Even reducing your weight a little (by 5–10%) can have big benefits.

Reducing your drinking

Your GP or nurse should advise you to limit the amount of alcohol that you drink.

- Don't binge drink or drink more than the total recommended for men or women per week.
- Women should have no more than 2–3 units of alcohol a day.
- Men should have no more than 3–4 units of alcohol a day.

Women should not drink more than 14 units per week and men should not drink more than 21 units per week.

A unit is about half a pint of normal strength beer, lager or cider, or a pub measure of spirits. A glass of wine is about 2 units.

Making changes to your lifestyle will help to reduce your risk.

Drug treatments to lower your cholesterol

Statins

If you have a higher risk of developing cardiovascular disease

If you have a one in five (20%) or greater risk of developing cardiovascular disease in the next 10 years, your GP or nurse should offer you treatment with a drug called simvastatin (a type of statin) to help reduce your cholesterol. If there are reasons why the usual dose of simvastatin is not suitable for you, you may be offered a lower dose of simvastatin or another statin called pravastatin.

Your GP or nurse may offer you statin treatment if your estimated risk of developing cardiovascular disease in the next 10 years is less than 20% but you have other risk factors (for example, you are a man with a South Asian background, or you have a close relative who had cardiovascular disease at a young age or you are very overweight). If you are over 75 your risk of developing cardiovascular disease is likely to be higher than 20% because of your age. Statins may help reduce your risk. Your GP or nurse may offer you statin treatment, particularly if you smoke or have high blood pressure.

Before you start treatment, your GP or nurse should check:

- whether you smoke
- how much alcohol you drink
- your blood pressure
- whether you are a healthy weight
- the levels of glucose (sugar), fat and the different types of cholesterol in your blood
- the levels of thyroid hormones if you have high levels of fat in your blood.

They will take a blood sample to check how well your kidneys and liver work.

Your GP or nurse should help you to make changes to your lifestyle and will discuss the benefits and risks of statins with you. The discussion should take into account factors such as other medical conditions you may have. If you decide not to have treatment, your GP or nurse should suggest talking about your risk again in the future.

You may need treatment for more than just your cholesterol. Preventing heart disease and stroke also includes looking at blood pressure, smoking and diabetes. See www.nice.org.uk for guidance NICE has produced on these.

If you decide to start statins you will have a blood sample taken at 3 months and again at 1 year after the start of treatment to check how well your liver is working.

If you are at higher risk, your GP or nurse will not recommend that you use spreads, drinks and yoghurts containing plant sterols and stanols to lower cholesterol because there is not enough evidence at the moment that these products prevent cardiovascular disease.

If you have had a heart attack or stroke or have cardiovascular disease

If you have a stroke or have angina or peripheral arterial disease your healthcare professional will offer you a statin but may carry out some blood tests first to find out how well your liver is working and to check for other health problems such as diabetes. You are likely to be offered simvastatin, but may be given another statin called pravastatin if simvastatin is not suitable for you.

If you have a heart attack you will be offered a statin immediately. After a heart attack you may be advised to take a higher dose of statin. Your healthcare professional should discuss with you the benefits and risks of treatment and your preferences.

Your healthcare professional will take a blood sample about 3 months after you start treatment and again at 1 year to measure your cholesterol and how well your liver is working. If your cholesterol doesn't fall enough on the starting dose your healthcare professional may suggest increasing the dose of statin. They will discuss the risks and benefits of this with you.

Your GP or nurse will encourage you to make changes to your lifestyle to reduce your risk of having a heart attack or a stroke in the future.

Problems with statin treatment

If you need to start taking other treatments while taking a statin, your GP or nurse may recommend that you take a lower dose of your statin or stop taking it for a time.

Serious problems with statins are very rare. However, your GP or nurse should tell you to watch out for pain, tenderness or weakness in your muscles while taking a statin. If these occur, you should let your GP or nurse know.

Some treatments may not be suitable for you, depending on your exact circumstances. If you have questions about the specific treatments and options covered in this booklet, please talk to a member of your healthcare team.

Questions about cholesterol treatments

- Please tell me why you have decided to offer me this particular type of treatment.
- How will the treatment help me? How much will it reduce my risk by?
- What will happen if I decide I do not want to take the treatment? Are there other options?
- Are there any risks associated with this treatment?
- What should I do if I get any side effects? (For example, should I call my GP, or go to the emergency department at a hospital?)

If you cannot take statins

If statins are unsuitable for you, for example if you have certain illnesses, you may be offered another drug. These may be drugs called fibrates, nicotinic acid, anion exchange resins or ezetimibe.

More information

The organisations below can provide more information and support for people with or at risk of cardiovascular disease. Please note that NICE is not responsible for the quality or accuracy of any information or advice provided by these organisations.

- British Heart Foundation, 0845 0708 070, www.bhf.org.uk
- H·E·A·R·T UK – The Cholesterol Charity, 0845 450 5988, www.heartuk.org.uk
- South Asian Health Foundation (UK), 07771 933939, www.sahf.org.uk
- The Stroke Association, 0845 3033 100, www.stroke.org.uk

NHS Direct online (www.nhsdirect.nhs.uk) may also be a good starting point for finding out more. Your local Patient Advice and Liaison Service (PALS) may also be able to give you further information and support.

About NICE

NICE produces guidance (advice) for the NHS about preventing, diagnosing and treating different medical conditions. The guidance is written by independent experts including healthcare professionals and people representing patients and carers. They consider the best available evidence on the condition and treatments, the views of patients and carers and the experiences of doctors, nurses and other healthcare professionals working in the field. Staff working in the NHS are expected to follow this guidance.

To find out more about NICE, its work and how it reaches decisions, see www.nice.org.uk/aboutguidance

This booklet and other versions of this guideline aimed at healthcare professionals are available at www.nice.org.uk/CG067

You can order printed copies of this booklet from NICE publications (phone 0845 003 7783 or email publications@nice.org.uk) and quote reference N1575).

We encourage NHS and voluntary sector organisations to use text from this booklet in their own information about cardiovascular disease.